

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

B03CE Revision 1 Ballonbau Wörner GmbH NL-280/STU NL-380/STU NL-510/STU NL-640/STU NL-840/STU NL-1000/STU July 19, 2002
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TYPE CERTIFICATE DATA SHEET No. B03CE

This Data Sheet, which is part of Type Certificate No. B03CE, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder. Ballonbau Wörner GmbH
 Zirbelstrasse
 86154 Augsburg, Germany

I. Free Balloon Model NL-280/STU, approved September 17, 2001

<u>Description:</u>	(a) Diameter	8.11 m (26.6 ft.)
	(b) Displacement	280m ³ (9,889 ft ³)
	(c) Lifting Gases	Hydrogen, citygas, helium
	(d) Ballast Provisions	Sandbags - min. for takeoff: 2 each, 15 kg (33 lbs.)
	(e) Max. Weight	325 kg (717 lbs.)
	(f) Empty Weight	160 - 250 kg (353 - 551 lbs.)

<u>Number of Occupants:</u>	<u>Basket Size</u>	<u>Dimensions (cm)</u>	<u>Max. Occupants</u>
	I	80x65x110	1
	II	95x80x110	2

Load ring Size IIb

Serial No's Eligible.

II. Free Balloon Model NL-380/STU, approved September 17, 2001

<u>Description:</u>	(a) Diameter	9.00 m (29.5 ft.)
	(b) Displacement	380m ³ (13422 ft ³)
	(c) Lifting Gases	Hydrogen, citygas, helium
	(d) Ballast Provisions	Sandbags - min. for takeoff: 3 each, 15 kg (33 lbs.)
	(e) Max. Weight	441 kg (972 lbs.)
	(f) Empty Weight	165- 255kg (364 - 562 lbs.)

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<u>Number of Occupants:</u>	<u>Basket Size</u>	<u>Dimensions (cm)</u>	<u>Max. Occupants</u>
	II	95x80x110	2
	III	110x95x110	3
	IV	125x105x110	4
	Leichtbaukorb	125x105x110	4

Load ring Size IIb or IIIc

III. Free Balloon Model NL-510/STU, approved September 17, 2001

<u>Description:</u>	(a) Diameter	9.91 m (32.5 ft.)
	(b) Displacement	510m ³ (18013 ft ³)
	(c) Lifting Gases	Hydrogen, citygas, helium
	(d) Ballast Provisions	Sandbags - min. for takeoff: 3 each, 15 kg (33 lbs.)
	(e) Max. Weight	592 kg (1305 lbs.)
	(f) Empty Weight	170- 260kg (375 - 573 lbs.)

<u>Number of Occupants:</u>	<u>Basket Size</u>	<u>Dimensions (cm)</u>	<u>Max. Occupants</u>
	II	95x80x110	2
	III	110x95x110	3
	IV	125x105x110	4
	V	135x115x110	5
	Leichtbaukorb	125x105x110	4

Load ring Size IIb or IIIc

IV. Free Balloon Model NL-640/STU, approved September 17, 2001

<u>Description:</u>	(a) Diameter	10.81 m (35.5 ft.)
	(b) Displacement	640m ³ (22605 ft ³)
	(c) Lifting Gases	Hydrogen, citygas, helium
	(d) Ballast Provisions	Sandbags - min. for takeoff: 4 each, 15 kg (33 lbs.)
	(e) Max. Weight	749 kg (1652 lbs.)
	(f) Empty Weight	175 - 265 kg (386 - 584 lbs.)

<u>Number of Occupants:</u>	<u>Basket Size</u>	<u>Dimensions (cm)</u>	<u>Max. Occupants</u>
	II	95x80x110	2
	III	110x95x110	3
	IV	125x105x110	4
	V	135x115x110	5
	VI	145x125x110	6
	Leichtbaukorb	125x105x110	4

Load ring Size IIb or IIIc

V. Free Balloon Model NL-840/STU, approved September 17, 2001

<u>Description:</u>	(a) Diameter	11.91 m (39 ft.)
	(b) Displacement	840m ³ (29669 ft ³)
	(c) Lifting Gases	Hydrogen, citygas, helium
	(d) Ballast Provisions	Sandbags - min. for takeoff: 4 each, 15 kg (33 lbs.)
	(e) Max. Weight	975 kg (2150 lbs.)
	(f) Empty Weight	180 - 270 kg (397 - 595 lbs.)

<u>Number of Occupants:</u>	<u>Basket Size</u>	<u>Dimensions (cm)</u>	<u>Max. Occupants</u>
	IV	125x105x110	4
	V	135x115x110	5
	VI	145x125x110	6
	Leichtbaukorb	125x105x110	4

Load ring Size IIIb

VI. Free Balloon Model NL-1000/STU, approved September 17, 2001

<u>Description:</u>	(a) Diameter	12.61 m (41.4 ft.)
	(b) Displacement	1000m ³ (35320 ft ³)
	(c) Lifting Gases	Hydrogen, citygas, helium
	(d) Ballast Provisions	Sandbags - min. for takeoff: 5 each, 15 kg (33 lbs.)
	(e) Max. Weight	1.160 kg (2558 lbs.)
	(f) Empty Weight	190 - 280 kg (419 - 617 lbs.)

<u>Number of Occupants:</u>	<u>Basket Size</u>	<u>Dimensions (cm)</u>	<u>Max. Occupants</u>
	IV	125x105x110	4
	V	135x115x110	5
	VI	145x125x110	6
	Leichtbaukorb	125x105x110	4

Load ring Size III or IIIb

DATA PERTINENT TO ALL MODELS

Certification Basis Validated in accordance with Chapter 14 of the Code of Federal Regulations (14 CFR) Part 21.29 to 14 CFR Part 31, Airworthiness Requirements, dated July 1, 1964, as amended by 31-1 through 31-7, inclusive. Application for Type Certificate dated May 15, 2000.
Type Certificate No. B03CE, issued September 17, 2001.

Import Requirements Each balloon and any replacement parts manufactured in Germany must be identified as imported.
A U.S. Standard Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export, signed by a representative of the Luftfahrt-Bundesamt containing the following statement: "The balloon covered by this certificate has been examined, tested and found to conform to the type design approved under FAA Type Certificate B03CE and is in a condition for safe operation".

- Validation Date. Type Certificate No. B03CE was issued September 17, 2001, pursuant to 14CFR 21.29, in validation of the Luftfahrt-Bundesamt's certification of compliance with the aforementioned certification basis.
- Equipment. The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.
In addition to the basic equipment required by the certification basis, the following equipment is also required:

Approved Flight and Instruction Manual, NL-STU, for Free Balloons, dated January 1993.

For night-VFR operations, approved position light system. Note: approval of position light system must include finding of compliance to 14CFR Part 31.61, Static Discharge.
- Maintenance and Inspection. Maintenance and inspection must be carried out in accordance with the Ballonbau Wörner GmbH Instructions for Continued Airworthiness, Model NL-STU, dated May 2002, or later FAA accepted revision.
- Service Information. Ballonbau Wörner GmbH technical information (Service Bulletins), published in the English language for the U.S. Type Designs, that carry a statement "Approved by the Luftfahrt-Bundesamt" (LBA), may be interpreted as FAA approved.
- NOTE 1. A Current Weight and Balance Report, including a list of equipment included in the certificated empty weight, must be provided for each balloon at the time of original certification.
- NOTE 2. The following placard must be clearly visible to all occupants: "NO SMOKING".
- NOTE 3. The following operating limitations must be complied with:
(a) All flights shall be in accordance with VFR-DAY Flight. Night-VFR operations are permitted when balloon is equipped with an approved position lighting system.
(b) Adequate and acceptable precautions will be taken during inflation and deflation procedures for the proper protection of personnel and property.

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